

## The Knowledge Bank at The Ohio State University

### Ohio State Engineer

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### **Shop Welding Courses at O. S. U.**

By J. A. Foust, Instructor in Welding

The processes of welding and heat treating have gained so much favor, due to their extensive use, that their engineering science has been greatly developed, and has come to occupy a very important place in the training of engineers.

For best results in this training instructors must have a thorough practical and theoretical knowledge and understanding of the various phases of welding and heat treating in all fields, particularly in training the student to use the process intelligently in design and fabrication.

The courses in welding consist of six hours per week per quarter. They are presented by means of actual shop welding practice lectures, demonstrations and also by lantern slides and motion pictures.

Experiments are conducted, and by an understanding of them it is possible to see why various temperatures and quenching mediums will result in so many different structures in steel. These experiments show the affect the alloys have on the constituents and thermal critical points.

In the welding laboratory special problems are assigned to each student involving the use of all equipment on a variety of steels and non ferrous materials. A part of this work is required to be welded in jigs,

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and it is shown how it is possible to step up production, cutting down fabrication costs and at the same time obtaining satisfactory and accurate results.

We find that the students take a great interest in their experiments and obtain a great deal of engineering information.

These courses are revised each year in order that we may keep abreast of modern developments in engineering.